

Amendments to the Claims

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1. (original) An information generating device comprising at least display means and character or symbol input means, which is used in an information generating system for generating a receive unit file for transmission or communication to represent information created using a hyperlink, wherein display positions of plural pieces of information in the same file are brought into one-to-one correspondence with numeric keys, and into correspondence with one another through hyperlinks, and the correspondences do not accompany calling of another file.

2. (original) An information generating device comprising at least display means and character or symbol input means, which is used in an information generating system for generating a receive unit file for transmission or communication to represent information created using a hyperlink, wherein information is created for bringing display positions of plural pieces of ordered information into one-to-one correspondence with numeric keys in ascending numeric order.

3. (original) The information generating device according to claim 2, wherein pieces of the receive unit file in the same file are brought into correspondence with one another through hyperlinks not accompanied by calling of another file.

4. (original) An information generating device comprising at least display means and character or symbol input means, which is used in an information generating system for generating a receive unit file for transmission or communication to represent information created using a hyperlink, wherein plural pieces of ordered information are divided into files according to the file size or number of numeric keys, the divided plural files are brought into one another through hyperlinks, and display positions of the plural

pieces of information with sequence numbers in each file are brought into one-to-one correspondence with the numeric keys in ascending numeric order through hyperlinks.

5. (original) An information generating device comprising at least display means and character or symbol input means, which is used in an information generating system for generating a receive unit file for transmission or communication to represent information created using a hyperlink, wherein display positions of plural pieces of information in the same file, each piece being capable of fitting in one-screen display space of said display means, are brought into one-to-one correspondence with numeric keys, and into correspondence with one another through hyperlinks not accompanied by calling of another file.

6. (original) An information generating device comprising at least display means and character or symbol input means, which is used in an information generating system for generating a receive unit file for transmission or communication to represent information created using a hyperlink, wherein display positions of plural pieces of ordered information in the same file are brought into one-to-one correspondence with numeric keys through hyperlinks not accompanied by calling of another file, each piece of ordered information being capable of fitting in one-screen display space of said display means.

7. (original) A route guidance information generating device comprising: display means; map storage means storing a road network; input means for entering plural points; search means for taking in from said input means information obtained from said map storage means to calculate a route between plural points; route guidance element generating means for generating route guidance elements for route guidance on the basis of the route result calculated by said search means; and route guidance information generating means for generating route guidance information on the basis of

the route guidance elements generated by said route guidance element generating means, wherein said route guidance information generating means generates route guidance information at plural guide points on the route between plural points as plural pieces of ordered information or information capable of fitting in one-screen display space of said display means.

8. (original) The route guidance information generating device according to claim 7, wherein the route guidance information contains at least distance on each road to the next guide point.

9. (original) The route guidance information generating means according to claim 7, wherein the route guidance information contains at least intersection names.

10. (original) The route guidance information generating device according to claim 7, wherein the plural guide points include named intersections located at the nearest side of corresponding nameless intersections along the traveling direction as well as locations at which geographical orientations change to a considerable extent before and after intersections, Y branches and locations at which road types change.

11. (original) The route guidance information generating device according to claim 7, wherein the route guidance information contains at least display information images, which represent with arrows traveling directions at intersections of roads.

12. (original) The route guidance information generating device according to claim 7, wherein the route guidance information contains at least display information images, which represent with arrows directions indicative of crossing conditions at intersections of roads and traveling directions at the intersections of roads.

13. (original) The route guidance information generating device according to claim 7, wherein the route guidance information contains at least display information images, which represent with arrows directions indicative of crossing conditions at intersections of roads, widths of the roads and traveling directions at the intersections of the roads.

14. (original) The route guidance information generating device according to claim 7, wherein the route guidance information contains at least display information images which represent with arrows traveling directions at intersections of roads, and distance on each road to the next guide point, the distance being located at the tip of each arrow of the display information images that represent with the arrows the traveling directions.


15. (original) The route guidance information generating device according to claim 7, wherein the route guidance information contains at least display information images which represent break lines between the guide points.

16. (original) The route guidance information generating device according to claim 7, wherein the route guidance information contains at least any of character, image or voice information, or a combination of these pieces of information.

17. (original) The route guidance information generating device according to claim 7, wherein display positions of intersection names at the guide points in the route guidance information, composed of a plurality of names of intersections to pass through on the route between plural points, are brought into one-to-one correspondence with numeric key in ascending numeric order through hyperlinks.

18. (original) The route guidance information generating device according to claim 17, wherein a route guidance simplified map represented by images, the map

schematically synthesizing driving directions of the intersections at the plural guide points in one file, brought into one-to-one correspondence with the numeric keys, corresponding numerals are put in positions corresponding to the guide points on the route guidance simplified map, and the display positions are brought into one-to-one correspondence with the numeric keys in ascending numeric order, and into correspondence with one another thorough hyperlinks.



19. (original) The route guidance information generating device according to claim 7, wherein the positions at which corresponding numerals are represented on the route guidance simplified map are standardized on either the right or left side of the traveling directions.

20. (original) The route guidance information generating device according to claim 7, wherein information is created for representing the route guidance information in plural levels of hierarchy and associating the plural levels of the guidance information with one another through a hyperlink on a guide point basis.

21. (original) The route guidance information generating device according to claim 20, wherein the route guidance information represented in the plural levels of hierarchy is divided into files dependently on the division of the next-higher level of hierarchy.

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (original) A navigation device comprising: at least map storage means for storing a road network; input means for entering plural points; search means for calculating a route between the plural points inputted by said input means; route guidance element generating means for generating route guidance elements for route guidance on the basis of the route result calculated by said search means; route guidance information generating means for generating route guidance information on the basis of the route guidance elements generated by said route guidance element generating means; and present position calculating means for calculating the present position of its own device, wherein a display screen is displayed or voice guidance is performed through a hyperlink according the present position information on the basis of the route guidance information generated.

27. (original) An information generating method comprising: a route searching step of setting a starting place and a destination, inputting through input means information obtained from map storage means, and calculating a route between plural points; a step of generating route guidance elements for route guidance on the basis of the route result calculated in said route searching step; a step of generating route guidance information at plural guide points on the route between the plural points on the basis of the route guidance elements generated; and a step of displaying through display means the route guidance information generated, wherein display positions of plural pieces of route guidance information in the same file are brought into one-to-one correspondence with numeric keys so that the route guidance information will be serially displayed, and into correspondence with one another through hyperlinks not accompanied by calling of another file.

28. (previously presented) A storage medium for storing the route guidance information generated by said device according to claim 1.

29. (original) A communication-type navigation system for transmitting route guidance information searched at a center to a communication terminal to guide a user to a route, wherein said center divides the route guidance information into plural pieces each of which has a size equal to or less than the reception capacity of said communication terminal to transmit the divided information.

30. (original) The communication-type navigation system according to claim 29, wherein the route guidance information is represented according to a communication protocol or in an application language suitable for use in a network provided by said communication terminal.

31. (original) The communication-type navigation system according to claim 30, wherein the application language suitable for use in the network is compact hypertext markup language.

32. (original) The communication-type navigation system according to claim 30, wherein the application language suitable for use in the network is hypertext markup language.

33. (original) The communication-type navigation system according to claim 30, wherein the communication protocol suitable for use in the network is a wireless application protocol.

34. (original) The communication-type navigation system according to claim 29, wherein an initial geographical orientation of said communication terminal is displayed.

35. (original) The communication-type navigation system according to claim 34, wherein the initial geographical orientation is displayed in relation to the position of a celestial body.

36. (original) The communication-type navigation system according to claim 34, wherein the initial geographical orientation is displayed in relation to the position of a surrounding landmark or landmarks.

37. (original) The communication-type navigation system according to claim 29, wherein main points of the route are inputted.

38. (original) The communication-type navigation system according to claim 37, wherein the starting place is set by inputting the first intersection and the next intersection.

39. (original) The communication-type navigation system according to claim 37, wherein guidance elements located close to a real destination are listed so that one element will be selected and inputted therefrom.

40. (original) The communication-type navigation system according to claim 37, wherein input is done by voice.

41. (original) The communication-type navigation system according to claim 37, wherein input is done on an external keyboard connected to said communication terminal.

42. (original) The communication-type navigation system according to claim 29, wherein a turn cost at nameless intersections is weighted.

43. (original) The communication-type navigation system according to claim 29, wherein function select buttons are provided.

44. (original) The communication-type navigation system according to claim 43, wherein labels are attached to guide points on a route overview and a button indicated by a corresponding one of the labels is entered to shift the current screen to a guidance detailed screen.

45. (original) The communication-type navigation system according to claim 43, wherein a re-search button is provided at some midpoint on the route guidance.

46. (original) The communication-type navigation system according to claim 43, wherein a long-distance route is divided and searched, and a button to search for a continued part is provided at the end of each divided piece.

47. (original) The communication-type navigation system according to claim 43, wherein a button to determine whether priority is assigned to understandability of the route or reduction of hours of the travel.

48. (original) The communication-type navigation system according to claim 29, wherein a guidance program which describes the route guidance information is downloadable to said communication terminal.

49. (original) The communication-type navigation system according to claim 48, wherein an execution result of the guidance program downloaded is divided and displayed in a display area on said communication terminal.

50. (original) The communication-type navigation system according to claim 43, wherein a user is informed of changes in the route guidance information.

51. (original) The communication-type navigation system according to claim 50, wherein when a change in distance to a turn direction arrow display or intersection or to the destination occurs, the distance is displayed.

52. (original) The communication-type navigation system according to claim 50, wherein when the user approaches a guide point, the volume or tone color of a beep is changed.

53. (original) The communication-type navigation system according to claim 50, wherein when the user approaches a guide point, said communication terminal turns its backlight on.

54. (original) The communication-type navigation system according to claim 50, wherein when an event has occurred, said center informs said communication terminal of the event.

55. (original) The communication-type navigation system according to claim 50, wherein when the user deviates from the suggested route, re-search is activated.

56. (original) The communication-type navigation system according to claim 50, wherein when the user deviates from the suggested route, information on surrounding roads to pass through is transmitted to said communication terminal together with the suggested route.

57. (original) The communication-type navigation system according to claim 50, wherein routes including return routes to the original route are pre-calculated and sent to said communication terminal beforehand.

58. (original) The communication-type navigation system according to claim 29, wherein advertisements are displayed or conducted.

59. (original) The communication-type navigation system according to claim 30, wherein information on facilities of commercial sponsors are made viewable on the map so that said center will extract and display or conduct the facility information in the neighborhood of the route.

60. (original) The communication-type navigation system according to claim 59, wherein the commercial sponsors are charged.

61. (original) The communication-type navigation system according to claim 60, wherein each of the commercial sponsors is charged according to the number of times the advertisement concerned is displayed or conducted.